

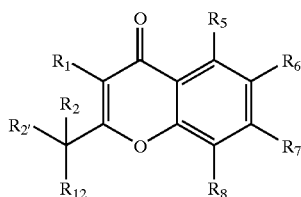
compound are made in a 96-well microtiter plate (Corning Costar 3695) using Solution 1. Following serial dilution each well has 50 μ l of Solution 1. The reaction is started by adding 50 μ l of solution 2 to each well. This may be done with a multichannel pipettor either manually or with automated liquid handling devices. The microtiter plate is then transferred to a microplate absorbance reader and multiple absorbance readings at 340 nm are taken for each well in a kinetic mode. The observed rate of change, which is proportional to the ATPase rate, is then plotted as a function of the compound concentration. For a standard IC₅₀ determination the data acquired is fit by the following four parameter equation using a nonlinear fitting program (e.g., Grafit 4):

$$y = \frac{\text{Range}}{1 + \left(\frac{x}{\text{IC}_{50}}\right)^s} + \text{Background}$$

where y is the observed rate and x is the compound concentration.

1-67. (canceled)

68. A method for the treatment of a cellular proliferative disease comprising administering to a subject in need thereof a pharmaceutical composition comprising a compound having the structure:



Formula I

and pharmaceutically acceptable salts, solvates, chelates, non-covalent complexes, prodrugs, and mixtures thereof, wherein:

R₁ is chosen from optionally substituted aryl-C₁-C₄-alkyl- and optionally substituted heteroaryl-C₁-C₄-alkyl-;

R₂ and R_{2'} are independently chosen from hydrogen, optionally substituted alkyl-, optionally substituted alkoxy, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, and optionally substituted heteroaralkyl-; or R₂ and R_{2'} taken together form an optionally substituted 3- to 7-membered ring;

R₁₂ is selected from the group consisting of optionally substituted imidazolyl, optionally substituted imidazolyl-, —NHR₄-, —N(R₄)(COR₃)-, —N(R₄)(SO₂R_{3a})-; and —N(R₄)(CH₂R_{3b})-;

R₃ is chosen from hydrogen, optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, optionally substituted heteroaralkyl-, R₁₅O— and R₁₇—NH—;

R_{3a} is chosen from optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, optionally substituted heteroaralkyl-, and R₁₇—NH—;

R_{3b} is chosen from hydrogen, optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, and optionally substituted heteroaralkyl-;

R₄ is chosen from hydrogen, optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heterocycl-, and optionally substituted heteroaralkyl-;

R₅, R₆, R₇ and R₈ are independently chosen from hydrogen, acyl, optionally substituted alkyl-, optionally substituted alkoxy, halogen, hydroxyl, nitro, cyano, dialkylamino, alkylsulfonyl-, alkylsulfonamido-, alkylthio-, carboxyalkyl-, carboxamido-, aminocarbonyl-, optionally substituted aryl and optionally substituted heteroaryl-; and

R₁₅ is chosen from optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, and optionally substituted heteroaralkyl-;

R₁₇ is hydrogen, optionally substituted alkyl-, optionally substituted aryl-, optionally substituted aralkyl-, optionally substituted heteroaryl-, or optionally substituted heteroaralkyl-, including single stereoisomers, mixtures of stereoisomers.

69. A method according to claim 68, wherein if either R₂ or R_{2'} is hydrogen, then the other is not hydrogen.

70. A method according to claim 68 wherein R₅, R₆, R₇ and R₈ are each independently selected from hydrogen, amino, alkylamino, hydroxyl, halogen, C₁-C₄ alkyl, C₁-C₄ haloalkyl, C₁-C₄ alkoxy, C₁-C₄ haloalkoxy and cyano.

71. A method according to claim 70, wherein R₅, R₆, R₇ and R₈ are each independently selected from hydrogen, cyano, methoxy, and halogen.

72. A method according to claim 71, wherein R₅, R₆, and R₈ are each hydrogen and R₇ is cyano, methoxy or halogen.

73. A method according to claim 68 or 69, wherein R₂ is optionally substituted C₁-C₄ alkyl and R_{2'} is hydrogen or optionally substituted C₁-C₄ alkyl.

74. A method according to claim 73, wherein R_{2'} is hydrogen and R₂ is optionally substituted C₁-C₄ alkyl.

75. A method according to claim 74, wherein R_{2'} is hydrogen and R₂ is ethyl or propyl.

76. A method according to claim 75, wherein R₂ is i-propyl.

77. A method according to claim 68, wherein R₁ is optionally substituted phenyl-C₁-C₄-alkyl- and optionally substituted naphthalenylmethyl.

78. A method according to claim 68, wherein R₁ is benzyl, chlorobenzyl, methylbenzyl, methoxybenzyl, cyanobenzyl, hydroxybenzyl, dichlorobenzyl, dimethoxybenzyl, or naphthalenylmethyl.

79. A method according to claim 78, wherein R₁ is benzyl-, cyanobenzyl-, methoxybenzyl-, or naphthalenylmethyl.

80. A method according to claim 79, wherein R₁ is benzyl.

81. A method according to claim 68, wherein R₁₂ is —N(R₄)(COR₃) and R₃ is selected from optionally substituted alkyl-, optionally substituted aralkyl-, optionally sub-